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(54) **TOUCH-SENSITIVE BEZEL TECHNIQUES**

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CPC ***G06F 3/044*** (2013.01); ***G06F 3/041*** (2013.01); ***G06F 3/0488*** (2013.01); ***G06F 3/04883*** (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,686,332 A 8/1987 Greanias et al.
4,843,538 A 6/1989 Lane et al.
4,868,912 A 9/1989 Doering
5,231,578 A 7/1993 Levin et al.
5,237,647 A 8/1993 Roberts et al.
5,252,951 A 10/1993 Tannenbaum et al.
5,351,995 A 10/1994 Booker et al.
5,404,458 A 4/1995 Zetts
5,463,725 A 10/1995 Henckel et al.
5,491,783 A 2/1996 Douglas et al.
5,496,974 A 3/1996 Akebi et al.
5,497,776 A 3/1996 Yamazaki et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CN 1326564 12/2001
CN 1578430 2/2005
(Continued)

OTHER PUBLICATIONS

"Advisory Action", U.S. Appl. No. 12/709,376, Dec. 19, 2013, 2 pages.
(Continued)

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(57) **ABSTRACT**

Touch-sensitive bezel techniques are described. In one or more implementations, touch sensors located in a display portion and a bezel portion detect a touch input and determine, based on one or more characteristics of the touch input, a likelihood that a user intends or does not intend to interact with the computing device. A location of a centroid of an area of the touch input is on such characteristic that can be utilized. In at least some implementations, the bezel portion has display capabilities such that when a touch input is detected, the display capabilities in a region of the bezel portion can be made active to cause a menu to be displayed in the region of the bezel.

26 Claims, 9 Drawing Sheets